



Paige Graening  
Counsel

September 8, 2004

Mary Cottrell, Secretary  
Department of Telecommunications & Energy  
One South Station, 2<sup>nd</sup> Floor  
Boston, MA 02110

**RE: DTE 03-128 – Supplemental Information to New England Power  
Company's Response to USGen Record Requests 2 & 3**

Dear Secretary Cottrell:

Enclosed please find an original and six (6 ) copies of the captioned materials, which respond to a recent inquiry posed to New England Power Company by Intervenor US Generating New England, Inc.

Also enclosed is an additional copy of this filing letter to be date- and time-stamped and returned to me in the attached self-addressed, stamped envelope.

Respectfully submitted,

A handwritten signature in blue ink that reads "Paige Graening".

Enclosures

cc: Service List

**Graening, Paige**

---

**From:** Graening, Paige  
**Sent:** Wednesday, September 08, 2004 1:19 PM  
**To:** 'Gentleman, Mary Beth'  
**Cc:** Cerundolo, Pat  
**Subject:** RE: DTE 3-128

Mary Beth, I have discussed this matter in detail with Jack Martin, who provided the responses to USGen RR-2 and -3. We thought the best means of answering your questions below would be to prepare a written explanation of what went into the analyses. For that purpose, I am providing below a summary for your information. I will also convey this material to the City of Salem and to the Department. Thank you for your inquiry. Paige

USGen RR-2 first required the Company to assume "the implementation of the upgrades referenced in Section 9 of the April 2004 study" and then edasked for information regarding "the installation of a capacitor bank at King Street as early as is needed to address the voltage-support deficit, *if any*, identified by the Company at King Street." (emphasis added) After NEP assumed the upgrades proposed for Ward Hill, as outlined in response to USGen RR-1, a review of the worst case contingency voltages at King Street indicated that no additional voltage support would be needed at King Street in the years 2006 or 2007. (Please note that both the Salem Harbor capacitor banks and the Ward Hill upgrades are planned to be in-service by Summer 2006.) With the addition of the Ward Hill improvements, the study showed that the King Street voltages were within the criteria outlined in the Company's Transmission Planning Guide (and thus it would be inappropriate to install a capacitor bank at King Street). The tables provided in response to USGen RR-2 and labeled "no Salem capacitors" demonstrate this fact of the criteria. Accordingly, since the Ward Hill upgrades eliminate King Street's voltage problems, a voltage deficit is no longer identified under the circumstances described in USGen RR-2.

However, despite the implementation of the Ward Hill upgrades, there is still a need for additional voltage support at Salem Harbor to meet the 1.035 pu (119 kV) voltage schedule. Reactive support added at King Street would not achieve the desired voltage at Salem Harbor. Additional loadflow analysis performed by the Company relative to USGen RR-2 shows that, if 126 MVar of capacitors were added to each of the two King Street 115kV buses, the King Street 115kV voltages would be pushed above the 1.05 pu limit, but Salem Harbor voltage would be only 1.023 pu, which is below the voltage schedule allowance. In addition to the overvoltage problem that would be created at King Street, this capacitor installation would also be impractical due to lack of available space for capacitors at or near the site (which would require a property purchase – if any in the area were even available), construction of one or two new substations (again, if property were available for purchase), additional permitting problems given the wetlands and buffer zones surrounding the site and the commencement of new zoning proceedings, much higher costs (approximately \$5.8 million, compared to the \$1.8 million estimated for the Salem Harbor installation) and the resulting cost-benefit analysis which forecasts a relatively diminished voltage support improvement for the North Shore region even though more dollars, time and effort would be expended to site cap banks in Groveland, where the King Street substation is located.

The response to USGen RR-3 does not include an analysis of capacitors at King Street, based on the assumptions and circumstances described in the first paragraph above.

-----Original Message-----

09/08/2004



**From:** Gentleman, Mary Beth [mailto:MGentleman@Foleyhoag.com]  
**Sent:** Friday, September 03, 2004 12:56 PM  
**To:** Graening, Paige  
**Cc:** Cerundolo, Pat  
**Subject:** DTE 3-128

Paige--

This email is a follow-up to our phone conversation today regarding NEP's responses to Record Requests 2 and 3. Those two record requests were asked to help us understand the system impact of locating the proposed cap bank at King Street instead of at Salem Harbor. Record Request 2 was a request to regenerate the table in DTE 1-8 assuming the all of the upgrades over time in the April 2004 study including three new transformers at Ward Hill (instead of one) *but* with the installation of the proposed cap bank in the King Street area (if needed) *instead* of at Salem Harbor. Record Request 3 was for revised Q-V curves using the same assumptions as in Record Request 3.

Our review of the responses indicates that the April 2004 study assumptions were used but instead of simulating a cap bank at King Street, the Company assumed it would be at Salem Harbor. If that is not correct, please let me know. Assuming our review is correct, we still need to see the impact of the alternative (siting a cap bank near King Street instead of at Salem Harbor) on the system.

I will be around today and on Tuesday.

Thank you.

Mary Beth

Mary Beth Gentleman  
Foley Hoag LLP  
World Trade Center West  
155 Seaport Boulevard  
Boston, Massachusetts 02210  
617.832.1199 (phone)  
617.832.7000 (fax)  
mgentleman@foleyhoag.com  
[www.foleyhoag.com](http://www.foleyhoag.com)

\*\*\*\*\*

This e-mail communication and any attachments are confidential and intended only for the use of the designated recipients named above. This communication may be an attorney-client communication and as such is privileged and confidential. If you are not the intended recipient, you are hereby notified that you have received this communication in error and that any review, disclosure, dissemination, distribution or copying of it or its contents is prohibited. If you have received this communication in error, please notify Foley Hoag LLP immediately by telephone at (617)832-1000 and destroy all copies of this communication and any attachments.

09/08/2004